

Date: Sun, 6 Jun 93 13:07:34 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #687  
To: Info-Hams

Info-Hams Digest                      Sun, 6 Jun 93                      Volume 93 : Issue 687

Today's Topics:

                    ANS-156 BULLETINS  
                    Curtis 8044,8044B,8044ABM ?  
                    InstaTrak  
                    need info on 9600 baud radio links  
                    Nickel-hydride batteries  
                    Pager information sought  
                    RACES Bulletin #277  
                    rsgb gb2rs news 6th june 1993

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 6 Jun 93 17:15:40 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: ANS-156 BULLETINS  
To: info-hams@ucsd.edu

SB SAT @ AMSAT   \$ANS-156.01  
ARSENE MODE-S TRANSPONDER OPEN

HR AMSAT NEWS SERVICE BULLETIN 156.01 FROM AMSAT HQ  
SILVER SPRING, MD JUNE 5, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-156.01

ARSENE Mode-S Operations Began 01-JUN-93

F6BVP announces that the Radio Amateur Club de l'Espace (RACE) has officially released ARSENE for Mode-S traffic beginning Tuesday, 01-JUNE-93! F6BVP reports that the linear transponder uplink frequency is 435.100 MHz with a +/- 8 KHz passband. The downlink is centered on 2446.540 MHz. All modes are possible, CW, SSB, packet, etc. F6BVP suggests that in dealing with the doppler-shift on the downlink frequency, one should look for the ARSENE telemetry beacon on 2446.470 MHz and then make the corrections in your uplink frequency to find yourself. An uplink power of 500 watts to 1 KW EIRP will be quite sufficient due to the excellent AGC in the ARSENE UHF receiver. F6BVP says that radio amateurs can expect the Mode-S transponder operation to continue until further announcements. Also, the VHF telemetry beacon has been turned off while the ARSENE ground controllers study the thermal cooling and electrical power budget issues with the Mode-S transponder in operation. However, a serious investigation is underway by ground controllers to try to understand this failure of the VHF downlink packet radio transmitter is not functioning.

Please watch for further updates to the ARSENE Mode-S transponder operations in the AMSAT News Service (ANS) bulletins.

[The AMSAT News Service (ANS) would like to thank F6BVP for the information which went into this bulletin item. If you would like to write to F6BVP, his INTERNET address is [f6bvp@amsat.org](mailto:f6bvp@amsat.org) and on packet he can be reached at [f6bvp@f6bvp.frpa.fra.eu](mailto:f6bvp@f6bvp.frpa.fra.eu). Please send your signal reports and any other telemetry data to F6BVP at either of the above addresses.]

/EX

SB SAT @ AMSAT \$ANS-156.02  
AMSAT BBS COORDINATOR NAMED

HR AMSAT NEWS SERVICE BULLETIN 156.02 FROM AMSAT HQ  
SILVER SPRING, MD JUNE 5, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-156.02

AMSAT-NA Names N6DBF As The AMSAT Bulletin Board System (BBS) Coordinator

Andy McAllister (WA5ZIB), AMSAT's Vice-President for User Services has announced that John Wisniowski (N6DBF) has been appointed AMSAT BBS Information Coordinator. The appointment was made following consultation with AMSAT-NA President Bill Tynan (W3XO). Andy noted that, this represents more of a re-appointment rather than a new position. John had actually served in such a capacity several years ago, so this is somewhat a reaffirmation of a previous appointment.

In addition to serving as BBS Information Coordinator, John provides AMSAT data on The Orange County Astronomy Bulletin Board in southern California.

Including this one, the following BBSs are known to be regularly providing AMSAT information.

QTH	SysOp	Number	Max Data Rate	Name
NJ	Me1 Roman KA2UPD	201-261-2780	2400	AMSAT BBS
CA	John Wisniowski N65DBF	714-738-4331	2400	Orange Co. Astronomy
CA	WB6BDY	619-279-3921	2400	Radio Sport
TX	Jeff Wallach N5ITU	214-394-7438	9600	DRIG
OH	T.S. Kelso	513-427-0674	9600	Celestial
MD	Joe Kasser G3ZCZ	301-593-9067	9600	

Anyone having additional infirmation on these, or any other bulletin boards providing AMSAT information, are asked to contact John Wisnoiwski via [n6dbf@amsat.org](mailto:n6dbf@amsat.org).

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SB SAT @ AMSAT \$ANS-156.03  
AMSAT SPONSORS FD ACTIVITY

HR AMSAT NEWS SERVICE BULLETIN 156.03 FROM AMSAT HQ  
SILVER SPRING, MD JUNE 5, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-156.03

#### 1993 AMSAT Field Day Competition Announcement

Field Day is once again just around the corner on June 26th and 27th, and AMSAT is proud to announce the 1993 AMSAT Field Day competition. Last year's effort was very successful and we will be using the same special rules with only slight modifications. The AMSAT competition is to encourage the use of all amateur satellites, including the digital satellites.

Here are the rules for the 1993 AMSAT Field Day competition:

##### 1. ANALOG TRANSPONDERS

Each satellite is considered a separate band. All phone QSO's and all CW QSO's on a given satellite are considered separate bands. All packet/RTTY/ASCII/AMTOR QSO's are counted as CW QSO's. Phone QSO's count for one point

and CW QSO's count for two points. Cross-mode contacts are not allowed. The use of more than one transmitter at the same time in a single band is prohibited.

## 2. DIGITAL TRANSPONDERS

Each satellite is considered a separate band. The following uploads/downloads each count as a CW contact (two points):

- (a) Upload of a Satellite Field Day Greetings file (limit one).
- (b) Download of Satellite Field Day Greetings files posted by other stations.

Satellite digipeat QSO's do not count for any score. The use of gateway stations to uplink/downlink is not allowed.

### SAMPLE SATELLITE FIELD DAY GREETINGS FILE:

"Greetings from K5DX Field Day Satellite station in Brenham, Texas with 24 participating members. All the best and 73!"

## 3. OPERATING CLASS

Stations running only emergency power are in a separate operating class from those that utilize commercial power.

A Satellite Summary Sheet may be found in the March/April 1992 issue of The AMSAT Journal on page 27. If you do not have access to this issue, send a S.A.S.E. to Andy MacAllister (WA5ZIB), Vice President User Services, 14714 Knights Way Drive, Houston, TX 77083-5640, to get a copy of the summary sheet. Please submit your AMSAT Field Day competition results to WA5ZIB at the address above by August 28, 1993.

Competition was tough in 1992 and should be even tougher in 1993. We hope this competition provides satellite operators with the practice necessary to be able to set up a ground station and effectively operate the satellites in an emergency situation. Remember that Field Day also provides a good opportunity to give some newcomers a chance at operating the satellites. Most of all, it should be a lot of fun for all who participate.

GOOD LUCK ON FD!

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SB SAT @ AMSAT \$ANS-157.04  
AMSAT OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 156.04 FROM AMSAT HQ

SILVER SPRING, MD JUNE 5, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-156.04

#### AMSAT Operations Net Schedule

AMSAT Operations Nets are planned for the following times. Mode B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz.

Date	UTC	Mode	Phs	NCS	Alt NCS
12-Jun-93	2300	B	132	WA5ZIB	WJ9F
19-Jun-93	1600	B	149	W9ODI	N7NQM
26-Jun-93	1800	B	111	W5IU	WA5ZIB

Any stations with information on current events would be most welcomed. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations are encouraged to join the OPS Nets. In the unlikely event that either the Net Control Station (NCS) or the alternate do not call on frequency, any participant is invited to act as the NCS.

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#### Slow Scan Television on AO-13

SSTV sessions will be held on immediately after the OPS Nets a downlink on a Mode-B downlink frequency 145.960 MHz.

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SB SAT @ AMSAT \$ANS-156.05  
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 156.05 FROM AMSAT HQ  
SILVER SPRING, MD MAY 29, 1993  
TO ALL RADIO AMATEURS BT  
BID: \$ANS-156.05

Weekly OSCAR Status Reports: 05-JUN-93

#### AO-13: ATTITUDE CHANGE

L QST \*\*\* AO-13 TRANSPONDER SCHEDULE \*\*\* 1993 May 31 ->

Mode-B : MA 0 to MA 256 This is a temporary schedule

Omnis : MA 250 to MA 60 while magnetorquing from BLON/BLAT of 210/0  
to 120/0 is in progress.

When the Sun angle degrades, the ON period will be shortened to about 160 MA counts centered around the best squint angle, and possibly to 55 MA counts during the poorest Sun angle. Please monitor the beacon for the latest

information. Magnetorquing to BLON/BLAT 120/0 via 180/15, 160/15 has begun. This is a large and slow re-orientation, as perigee eclipses steal 50% of each torquing session, and so this will take about 10 days. Transponder performance will sometimes be poor. Magnetorquing is not an exact science, and when the Sun angle reaches more than the target maximum of 40 degrees, the Mode-B transponder will have to be restricted to 55 MA counts for a few orbits. The transmitter section of AO-13's Mode-L transponder appears to have stopped working. No cause has been established for this. The AGC and Power Output telemetry both read #FF, and the TX temperature is as per an off condition. It has exciter power, but possibly not PA power. Fortunately the Mode-L receiver works fine; in conjunction with Mode-S telemetry provides a greatly superior command link than does Mode-B. Thinking continues. [G3RUH/DB20S/VK5AGR]

AO-10: KD4QIO reports that 03-JUN-93 that he heard 5 stations and worked two of them with signal reports of 52 and 55. This was also his first time on AO-10! Then on 04-JUN-93, he heard and worked 6 stations, again signal reports ranged from 44 to 55, with one South American station also heard. K84QIO works AO-10 with 19 watts into 22 element yagi (vertical polarization) until AO-10 gets to about 20,000-25,000 KM in slant range from his QTH. After that, his signal is down in the noise. He uses for the downlink antenna a KLM-14C and a LANDWHER preamp. He says that there is generally a lot of spin modulation on all signals but if you get into a good "rhythm," you can overcome it. KD4QIO comments that "with a little patience, AO-10 can still provide many good contacts." [KD4QIO]

AO-16: Operating normally. [WH6I]

UO-22: Operating normally. [WH6I]

KO-23: Operating normally. The ground controllers will be uploading new software on 06-JUN-93 and 07-JUN-93 and advise that everyone download items they want before then in case something happens to the RAMDISK, which is not supposed to be wiped out with this operation. [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

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Date: 6 Jun 93 13:55:42 EDT  
From: swrinde!gatech!howland.reston.ans.net!darwin.sura.net!news-feed-1.peachnet.edu!umn.edu!gaia.ucs.orst.edu!wsrcc.com!wetware!spunky.RedBrick.COM!psinntp!psinntp!arrl.org@network.UCSD.EDU  
Subject: Curtis 8044,8044B,8044ABM ?  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, davidc@hplsla.hp.com (David Cook) writes:  
>What are the differences between the 8044, 8044B, and 8044ABM Curtis Keyer  
>IC's? I am thinking about ordering one of these for a keyer project. I  
>have a schematic for a circuit using the 8044. Are the B and ABM version  
>drop in replacements?  
>  
>Thanks in advance for your replies.  
>  
>Dave Cook KB7QCL  
>

Only the 8044ABM is still available. It is NOT pin compatible with the 8044A and 8044B. The differences between "Curtis A" and "Curtis B" operation are subtle but significant. In "A" mode, if you are sending a string of dashes and hit the dot lever while a dash is being sent, then stop sending, the dot will not be picked up by the keyer. In "B" mode the dot is sent. The built-in keyers I've used in Icom, Kenwood and Yaesu gear are "B" mode. Of course, you only notice this feature if you use an iambic paddle.

The 8044ABM is not an antiballistic missile. Instead, it offers a choice of A or B mode, plus a "speed meter" option. It's the only Curtis keyer chip still available. It cannot be directly substituted for the other chips.

The 1994 ARRL Handbook will have a new keyer circuit based on the 8044ABM.

73, Jim, KR1S

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jkearman@arrl.org

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Date: 6 Jun 1993 17:13:58 GMT  
From: usc!howland.reston.ans.net!noc.near.net!bigboote.WPI.EDU!parker.WPI.EDU!bhiller@network.UCSD.EDU  
Subject: InstaTrak





Subject: Nickel-hydride batteries  
To: info-hams@ucsd.edu

In <lugo0r\$dr4@k2.sj.ate.slb.COM>, jones@sj.ate.slb.com (Clark Jones) wrote:

>here from Panasonic that lists two different chemistries of "Lithium  
>Rechargeable Batteries"... One advantage listed for the Vanadium Pentoxide  
>cells is "Self discharge rate less than 2%/yr."

At the moment, I'm designing a panasonic Vn05Li cell (vl1220) into a new product. Quite a neat little cell--you can float them at 3.5V and they only draw 35 uA at that float voltage. This makes them a natural for backup applications that would have had required a regular replaceable LiMn cell and some sort of circuit to isolate the cell from external power.

73, Gord.

znha@ve3ppe.isis.org (internet) ve3ppe@ve3osq.#eont.on.can.na (packet)

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Date: 6 Jun 93 12:38:27  
From: usc!howland.reston.ans.net!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!  
nntp!pan@network.UCSD.EDU  
Subject: Pager information sought  
To: info-hams@ucsd.edu

I am interested in learning about how pagers/paging systems operate and could start with information such as:

- Are pager deliveries guaranteed? (What if the recipient is in a tunnel?)
- What frequencies do pagers use?
- Are coding systems for pagers published anywhere?
- Any books, magazines, documents, newsgroups for more info?

Email replies are preferred. (pan@lurch.stanford.edu)

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Date: 6 Jun 93 16:33:04 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: RACES Bulletin #277  
To: info-hams@ucsd.edu

Bid :\$RACESBUL.277

TO: ALL EMERGENCY MANAGEMENT AGENCIES VIA AMATEUR RADIO

INFO: ALL RACES OPERATORS IN CA (ALLCA: OFFICIAL)  
ALL AMATEURS U.S. (@ USA: INFORMATION)  
FROM: CA STATE OFFICE OF EMERGENCY SERVICES (W6HIR @ WA6NWE.CA)  
2800 Meadowview Rd., Sacramento, CA 95832 (916)262-1600  
Landline BBS open to all: (916) 262-1657  
RACESBUL.277 DATE: June 7, 1993  
SUBJECT: MGT - Management philosophy - Part 1/2

Experience dictates that, in a major disaster, communications will fail due to direct effects of the disaster itself such as fire, earthquake, flood, etc. Different government entities often have radios fixed on different frequencies but they cannot talk with each other. At the time of the Loma Prieta earthquake, near San Francisco, it became apparent that many dedicated emergency systems had not been properly maintained and tested, and thus were useless in the early stages of the response. Back-up generators would not come on line when needed, for example.

While cellular telephones added a new dimension to disaster communications, they too may be overloaded or fail.

In light of this experience the flexibility of portable communications gear, carrying its own power supply, proved to be invaluable. Amateur Radio, with its highly portable capability, has the experience, equipment, and flexibility to fill many roles.

Fixed, home based Amateur Radio stations, however, have a very limited usefulness in government-to-government communications, such as from a forward area fire camp to a rear area logistics or command center. Yet they can be invaluable in handling "health & welfare" traffic, which is likely to be generated from throughout the country and require numerous relays.

(Concluded in the next Bulletin)

EOM

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RACES Bulletins are archived on the Internet at [ucsd.edu](http://ucsd.edu) in [hamradio/races](http://hamradio/races) and can be retrieved using FTP.

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Date: Sat, 5 Jun 1993 06:18:57 GMT  
From: [usc!howland.reston.ans.net!ux1.cso.uiuc.edu!newsrelay.iastate.edu!destroyer!  
cs.ubc.ca!alberta!adec23!ve6mgs!rec-radio-info@network.UCSD.EDU](mailto:usc!howland.reston.ans.net!ux1.cso.uiuc.edu!newsrelay.iastate.edu!destroyer!cs.ubc.ca!alberta!adec23!ve6mgs!rec-radio-info@network.UCSD.EDU)  
Subject: rsgb gb2rs news 6th june 1993  
To: [info-hams@ucsd.edu](mailto:info-hams@ucsd.edu)

Good morning. It's Sunday the 6th of June and here is the GB2RS news

broadcast, prepared by the Radio Society of Great Britain.

And we start with a special 'good morning' to all taking part in the RSGB National Field Day Contest.

First the headlines:- Look out for GB5SAW and GB2SEG this week; there's another Microwave Round Table this month; and bookings for the AMSAT-UK Colloquium are due in by the end of the month.

The callsign GB5SAW will be aired by the South-East Essex Sixth Form College from tomorrow, Monday the 7th until Friday the 11th, under the guidance of George, G1VCY. The idea is to introduce the students to the fascination of amateur radio. Operation will be on 2 metre and 70 centimetre, SSB, FM and Packet between 10am and 4pm. If you hear them, why not call in? If you are unable to call during the operating periods, then send a packet message to GB5SAW @ GB7DUG. Last years event was an unqualified success and an even better response is hoped for this year.

News now of an expedition by the Scottish Expedition Group to Buchan Ness, the most easterly point on the Scottish mainland. The callsign GB2SEG will be aired from next Friday the 11th through to Sunday the 13th. The WAB square is NK14 and the locator is IO97CL. For further information contact George, GM2TW on 0324 715624.

All listeners to this broadcast, whether RSGB members or not, are invited to the RSGB Headquarters Open Day on Saturday the 19th of June. This is a chance to tour the Society's administrative Headquarters, visit the GB3RS shack and see the QSL Bureau, Library and Museum. Doors are open between 10.30 am and 4.30 pm. Staff and volunteers will be on hand to answer queries, and the book shop will be open all day. A map of how to get there can be found in the June edition of Radio Communication, or call Belinda Gannon on 0707 659015 for details.

There will be another RSGB Microwave Round Table meeting on Sunday the 20th of June. Organised by the RSGB Southern Microwave Group, the event will be at the Crawley Amateur Radio Club premises at Pease Pottage, near Crawley, West Sussex, and it will commence at 10am. The attractions include: Technical talks, power and noise figure measurements, travelling wave tube demonstration and the usual round table discussions. There will also be a bring and buy stand. Hot drinks and snacks will be available. For further details telephone Mike, G3LYP on 0494 881298.

The Annual AMSAT-UK Colloquium takes place from the 29th of July to the 2nd of August. Full details of this major event for those interested in satellites can be obtained by writing to AMSAT-UK, 94 Herongate Road, Wanstead Park, London E12 5EQ. Completed booking forms for those attending and needing accommodation should be returned to AMSAT-UK, by the 1st of July.

Now some items of HF DX news from the weekly RSGB DX News Sheet which is edited by Brendan McCartney, G4DY0. From the Bahamas, N4JQQ will sign C6AFP from the Island of Great Abaco, from tomorrow, Monday the 7th for one week. Main activity will be on 6 metres, but some WARC band and CW operation is also likely. From Svalbard, LA6MY is signing JW6MY from now until September, using CW only. From Ile Verte, a French group will use the callsign TM5IV from Friday the 11th, until Monday the 14th of June.

Rally news now and we know of one Rally for today, Sunday, the 6th of June:

The 25th Spalding Mobile Rally is being held at the Springfield Gardens, Spalding. Doors open at 10.00am. There are trade stands, a flea market and radio boot sales. All trade stands and the flea market will be under cover in the new Exhibition Halls. Morse testing will be available on demand and refreshments will be on hand. The entrance fee includes entry to Springfield Gardens.

We know of two rallies for Sunday the 13th of June:

Elvaston Castle National Radio Rally is to be held at the Elvaston Castle Country Park, near Derby. The Show ground is located five miles South East of Derby on the B5010 road and is well signposted. There will be over 150 trade stands, together with all the usual attractions including the grand bring and buy marquee. There is also a flea market which will open at 9am and a craft marquee. Children's entertainments will take place through the day, also there will be live band performances during the day. Refreshment will be available. Talk-in will be on 2 metre and 70 centimetres via GB2ECR. Further details from John, G4PZY on 0332 767994.

The Royal Naval Amateur Radio Society Annual Mobile Rally is to be held at the Sports Field, HMS Collingwood, Fareham, Hants. Doors open at 10.00am. The event features dozens of trade stands of interest to radio amateurs and computer enthusiasts. Also children's amusements and other attractions for all the family. Refreshments will be available. Talk-in will be on 2 metre and 70 centimetres. Details from Cliff, G4UJR on 0703 557469.

And we have news of three other events later this summer:

The organisers of the Longleat Amateur Radio Rally are apparently suffering from an incorrect rumour concerning entrance prices. It is quite untrue that it will cost over ten pounds a head, the entrance will be a modest increase on last year at 2.50 for adults, 2.00 for pensioners and 50 pence for children.

The Scarborough Amateur Radio Society regrets that due to circumstances beyond its control, the Radio and Electronics and Computer Rally planned for the 25th of July has had to be cancelled. However, the club is pleased to announce that

next year's Rally will be held on the 29th of August 1994, Bank Holiday Monday, at the Spa on Scarborough Sea front. For further information contact Ross, G4ZNZ on 0723 514767.

A new event is the East Yorkshire Radio Rally which will be held at the Beverley Racecourse on Sunday the 25th of July. There will be trade stands, special interest groups, plus a bring and buy stall. Traders or others interested should contact Peter, G4EJP on 0964 550397 evening or 0964 550921 during working hours.

HF contest news now:

The RSGB's HF National Field Day is taking place this weekend, finishing today, the 6th at 1500GMT. An article celebrating 60 years of NFD can be found in June's RadCom. The All Asian CW Contest runs from 0000 on Saturday the 19th to 2400 on Sunday the 20th. All bands from 160 to 10 Metres will be used, but excluding the WARC bands. Contest exchange is RST and two figures indicating age, ladies to send 00. The Spanish URE RTTY Contest is scheduled to start on Saturday the 19th June at 1600 and runs for 24 hours. Use 45.5 bauds and 170Hz shift. See June RadCom page 16 for information.

Now some VHF contest news:

The RSGB 50MHz Trophy Single and Multi-Operator Contest takes place next Sunday the 13th of June from 0900 to 1700GMT. The RSGB 432MHz FM Fixed and Open Contest is on Saturday the 19th of June from 1800 to 2200GMT. Also the RSGB 70MHz CW Contest is on Sunday the 20th of June from 0800 to 1100GMT. Please note, this event does not take place on the 7th as printed in February's RadCom. Details for all three are to be found in February RadCom on page 66.

And now the solar factual data

The period 24th to 30th May has seen a reasonable increase in solar activity, with some quiet geomagnetic levels giving improved HF band conditions. Sporadic E has been reported on both 10 and 6 metres. Three small M type flares were reported, the largest being an M1.4/SF on the 28th. Sunspot counts climbed from 34 on the 24th up to 130 by the 29th giving a mean of 95 for the period. Solar flux levels have also increased reaching 140 units on the 30th, with the period averaging 117 units. The geomagnetic Ap indices were very quiet at first, being down to only 1 on the 25th, but rose to the very unsettled level of 21 units by the 27th, together with a considerable decline in HF band conditions. The period averaged 9.2 units. The state has been 'nil nothing to report' throughout the period. The data on radio quality indices are not all to hand due to the holiday. For the period 24th to 27th May levels increased well above normal up to very good, with the Tokyo and Fort Collins Boulder circuits being up to excellent. With the increase of geomagnetic levels on the 27th, the radio quality indices fell to well below normal. The

daily average aa indices, as supplied by the British Geological Survey for the period 18th to 24th May, were down to quiet levels of only 11.4 nanoTeslas, K2, with the 24th being very quiet at only 5.8 nanoTeslas, K1. The X-ray flux has risen considerably reaching B4.9 on the 27th and averaging B3.7 for the period.

Now the ionospheric data for Central France:

This week, due to the holiday, not all the data is to hand. The F2 daytime critical frequencies at Poitiers as reported by Meudon for the 24th to the 27th of May rose to quite high levels, reaching 9.4MHz on the 26th and averaging 8.7MHz for the period. The darkness hour lows have not changed much and averaged 4.9MHz.

Now the ionospheric data for the north:

The F2 daytime critical frequencies at Ekaterinberg for the 23rd to 27th May averaged 7.6MHz and the lows 5.8MHz.

And now the solar forecast:

This week, one of the quieter parts of the sun will be looking our way. Solar flux levels are expected to be about the 110s. Based on the radio quality indices, the HF bands should be around normal but the passage of an old but rather large coronal hole may give some magnetic disturbance later in the week. The Lyrids meteor shower is expected from the 4th to the 12th June. And finally, Nikola Tesla's dream has come true. A series of far reaching experiments in the Space Power Systems project has now shown that very large amounts of usable power can be transmitted at microwaves, using Wireless Power Transmission Technology. In one test 30 kilowatts was passed using a frequency of 2.45GHz which was converted to DC with an efficiency of 82%. Recently an aircraft used for communication purposes was controlled, and kept at the high altitude of 70,000 feet indefinitely, powered by microwaves. Tesla was rather ahead of his time in 1912 when he tried to do it on Long Island.

And that is the end of the propagation information.

Finally in the main news, SSL has informed the Society that as of last Wednesday morning, the latest callsigns issued were in the G0 Tango Tango and G7 Oscar Whiskey series, and Novice calls in the 2 0 Alpha Foxtrot and 2 1 Bravo X-ray series.

You're listening to GB2RS, the news broadcasting service of the Radio Society of Great Britain, transmitting in the 80, 40, 6 and 2 metre bands.

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End of Info-Hams Digest V93 #687  
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